

REMARKS

Claims 2 to 5, 10 and 11 were rejected under 35 U.S.C. § 112, second paragraph and Claims 1 and 6 to 13 were rejected under 35 U.S.C. § 103.

Claim 1 has been canceled. Claims 2 to 6, 18, 10, 11 and 12 have been amended. New claims 14 to 20 have been added.

35 U.S.C. §112, second paragraph

Claims 2 to 5, 10 and 11 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite.

These claims have been amended to properly recite the printing press, except for claim 10. Claim 10 has been amended to positively recite and intake area for the sheet and an outlet area, which are where the sheet is entered and removed from the system, respectively.

Withdrawal of the 35 U.S.C. § 112, second paragraph rejection is respectfully requested.

Claims 2 to 5, 10 and 11 were not subject to a prior art rejection and allowance of these claims is respectfully requested.

35 U.S.C. §103

Claims 1 and 12 were rejected under Kruger in view of Kuroyanagi.

Kruger, assigned to the present assignee, discloses a sheet transport system for a rotary printing press, with a first drive element on a first rail and a second drive element on a second rail. The drive elements shown in the figures are held together via a sheet holder having grippers mounted on a cross member, with the grippers engaging a front edge of the sheet.

Kuroyanagi discloses a copier with a staple-stacking apparatus with a tip advancing gripper, which moves in both directions, holding the side of the sheet.

Claim 1 has now been canceled. Two new independent device claims have been added, namely claim 14, which recites “the at least one first gripper and the at least one second gripper pulling a sheet to be conveyed in a feed direction, the sheet having a first side edge, a second side edge and a front end with respect to the feed direction, the at least one first gripper engaging the first side edge of the sheet near the front end of the sheet, the at least one second gripper

engaging the second side edge of the sheet near the front end of the sheet, the at least one first gripper being mechanically decoupled from the at least one second gripper”, and claim 15 which recites “the at least one first gripper and the at least one second gripper pulling a sheet to be conveyed in a feed direction, the sheet having a first side edge, a second side edge and a front end with respect to the feed direction, the at least one first gripper engaging the first side edge of the sheet near the front end of the sheet, the at least one second gripper engaging the second side edge of the sheet near the front end of the sheet, the sheet having a free clearance in the feed direction over at least a section of the front end.”

Support for the claims is found in the specification, for example, at page 5, line 26 et seq. and in the drawings.

It is respectfully submitted that neither Kuroyanagi nor Kruger disclose the features of new claims 14 and 15, so that even a combination would not result in the claimed invention, and also that it would not have been obvious to provide the single side holding device of Kuroyanagi into the Kruger device, as Kruger is for a high speed rotary printing device and Kuroyanagi's device is for a copier with the sheet moving in both directions. Claim 12 has been amended to recite that the second gripper is mechanically decoupled from the first gripper, and withdrawal of the rejection to this claim is respectfully requested as well for the same reasons as with respect to claim 14.

Claims 6 to 9 and 13 were rejected as being unpatentable over Kruger in view of Kuroyanagi and further in view of DE 4,302,125.

Kruger and Kuroyanagi are discussed above. DE 4302125 discloses that printed sheets 2 are gripped by the leading edge by grips on an endless chain drive 10 to be pulled along the top of the endless drive and down over one end to be laid on a stack. To improve the sheet support additional grips for the sides of each sheet are mounted on a separate endless belt drive 15 which guides the sheets to a stack.

Claims 6 to 9 and 13 depend from claims 14 and 12, respectively, and withdrawal of the rejection to these claims is respectfully requested for the reasons discussed above.

In addition, DE 4,302,125 discloses two separate drives, one for the grips and another for the additional grips.

DE 4,302,125 thus does not show or teach the claim 6 limitation of “at least one pair of

lagging grippers running on the first and second rails", as the lagging grippers run on a separate device.

Claim 8 recites "magnets arranged at at least one of an intake area and at an outlet area of the first and second rails for opening the clamping jaws by magnetic force" and it is respectfully submitted that magnets are not shown in the cited prior art references.

Withdrawal for these reasons is respectfully requested as well.

Supplemental IDS


Concise translations or English-language equivalents of previously cited German language documents are provided herewith. The abstract for DE 4,302,125 clarified the two drive system discussed above.

CONCLUSION

It is respectfully submitted that the application is in condition for allowance and applicant respectfully requests such action.

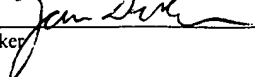
If any additional fees are deemed to be due at this time, the Assistant Commissioner is authorized to charge payment of the same to Deposit Account No. 50-0552.

Respectfully submitted,
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I hereby certify that this correspondence and/or documents referred to as attached therein and/or fee are being deposited with the United States Postal Service as "first class mail" in an envelope with sufficient postage addressed to "Assistant Commissioner for Patents, Washington, DC 20231" on May 24, 2002.
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VERSION SHOWING CLAIM CHANGES

IN THE CLAIMS

2. (Amended) [The sheet transport system as recited in claim 1] A rotary printing press with a sheet transport system comprising:

two cylinders forming a nip;

a first rail configured on one side of a sheet transport path and a second rail configured on the other side of the sheet transport path; and

at least one first driven gripper being guided on the first rail and at least one second driven gripper being guided on the second rail,

the at least one first gripper and the at least one second gripper pulling a sheet to be conveyed in a feed direction, the sheet having a first side edge, a second side edge and a front end with respect to the feed direction,

the at least one first gripper engaging the first side edge of the sheet near the front end of the sheet, the at least one second gripper engaging the second side edge of the sheet near the front end of the sheet, the at least one first gripper being mechanically decoupled from the at least one second gripper;

wherein the first and second rails run along [at least one] the nip [between two cylinders of the rotary printing press].

3. (Amended) The rotary printing press with the sheet transport system as recited in claim 2 further comprising a feeder and a delivery device, wherein the first and second rails run continuously between [a] the feeder and [a] the delivery device [of the rotary printing press].

4. (Amended) The rotary printing press with the sheet transport system as recited in claim [1] 2 further comprising an electronic control circuit for synchronizing the motion of the first and

second grippers with the rotation of cylinders of the rotary printing press.

5. (Amended) The rotary printing press with the sheet transport system as recited in claim 4 wherein the control circuit synchronizes the motion of the first grippers [which are mounted on different rails and] and second grippers [hold a same sheet].

6. (Amended) The sheet transport system as recited in claim [1] 14 further comprising at least one pair of lagging grippers running on the first and second rails to grip a lagging end of the sheet.

8. (Amended) The sheet transport system as recited in claim [1] 14 wherein the first and second driven grippers each include two clamping jaws, and further comprising magnets arranged at at least one of an intake area and at an outlet area of the first and second rails for opening the clamping jaws by magnetic force.

10. (Amended) The sheet transport system as recited in claim [1] 14 further comprising an intake area for the sheet and an outlet area wherein the first and second rails diverge at at least one of [at an] the intake area and [an] the outlet area transversely to the feed direction, in a plane of the transported sheet.

11. (Amended) The rotary printing press with the sheet transport system as recited in claim[1] 2 wherein the first and second grippers hold the sheet in an area of the sheet that extends beyond [the] a width of the cylinders [of the rotary printing press].

12. (Amended) A method for transporting a sheet having a front edge and a first side edge and a second side edge in a rotary printing press comprising:

gripping the first side edge near the front edge with a first gripper;

gripping the second side edge near the front edge with a second gripper mechanically

decoupled from the first gripper; and

moving the first and second grippers on rails configured on both sides of a sheet transport path so as to move the sheet along the sheet transport path.